

---

## Sheet 6 (2D Graphics)

---

1. What is the purpose of each of the following OpenGL function calls? Explain how the parameters are used, if any.
  - a) `glClear(GL_COLOR_BUFFER_BIT);`
  - b) `glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB | GLUT_DEPTH);`
  - c) `glEnable(GL_DEPTH_TEST);`
  - d) `glOrtho(-50.0, 50.0, -50.0, 50.0, -50.0, 50.0);`
2. Writing text using OpenGL can be done using stroke or raster text drawing. Differentiate between the two types in stressing the advantages and disadvantages of each of them.
3. Approximate the curve specified by the implicit equation:  $x^2 + y^2 - 25 = 0$  using the Marching Squares method. In other words, approximate the contour  $c=0$  of the function  $x^2 + y^2 - 25 = c$  using the Marching Squares method.